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CONTENTS.

Florida Not the "Italy of America," but far Superior to Italy.

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The Elevation, Geographical Formation, Soil, History, Population, Towns, Rivers, Railroads, Timber, Climate and Products carefully treated, giving much new and valuable information for tourists, winter residents, and settlers.

FLORIDA—ONE FLORIDA.

Earth has but one Florida, and that is ours. One peninsula in all of earth is washed on the west, south and east by the greatest, warmest of all rivers, "the Great River of the Ocean;" but one region in America, one place in all of earth over which devastating cyclones and tornadoes do not pass, carrying death and destruction in their paths; but one semi-tropical land over which siroccoes do not blow and parch; but one habitnat for plants, animals and men that is daily fanned by ocean breezes, and where men every day breathe balsamic odors from plants, trees and flowers; whose equally tempered atmosphere is health—that peninsula is Florida. It is the best inheritance bequeathed by the Father to His children, long reserved, but revealed at this last day, possessing treasures such as none of her sister States possess, or can secure.

Florida is incomparable with all other countries and regions. Some would compare it with Italy. There can be no comparison except by contrast. Italy is a region of hills and mountains, snow-capped during a large part of the year, Florida is nearly a plain, and in most of it snow was never seen, and nowhere lies. Italy is swept by cold mountain winds in winter, driving men and beasts to hyemal quarters, and by hot, relaxing siroccoes in summer; Florida is free from both of these extremes. Italy is often parched with droughts, making irrigation a necessity to the growth of vegetation. Florida has rains well distributed throughout the year. Italy is a peninsula extending into the Mediterranean Sea, whose waters are no warmer than the ocean in the same latitude. Florida is also a peninsula, but extends into the warmest portion of the ocean; and on the border of the trade winds, its breezes are tempered by the genial equability of the Gulf stream.

Spain and the Grecian Isles compare with Italy as to climate and productions. California compares favorably with Italy in its snow-capped mountains, winds and droughts, in its dry plains and needed irrigation, in rushing torrents and dry arroyas. If her panegyrists choose, they may compare that State to Italy, and call her the "Italy of America." But Florida stands alone; no place can be compared to her. Heterogeneous Florida; when attempts are made at comparison, they degrade rather than elevate her. Her highest praise is to call her by her own beautiful Castilian name, Florida. Italy would rejoice could she be the Florida of Europe. She never can. No country can be like Florida, and she needs no gems borrowed from another's crown.

HETEROGENEITY OF FLORIDA.

Whoever shall come to Florida with the expectation of seeing and finding what he has been accustomed to in other places will assuredly be disappointed. The greater the distance he may have traveled, especially from the North, the greater will the change appear. He may know that he is still in the United

States, but the trees, plants, animals, soils and seasons have changed, and even the dwellings and clothing of the people. In the forests he will miss nearly every tree with which he is familiar, or if he sees one, it is in a cold wet soil, or an extreme northern county, and in diminutive proportions. The woods of Florida are of other families and species, not less valuable, but different. The new comer may be amused for a season, but the chances are even that the difference will work dissatisfaction in a short time. If he comes from the rocky hills and mountains of New England, from the drift and boulder regions of Michigan and Wisconsin, he will miss the stone fences and gravel soils. If from the black sedimentary plains of Illinois and Iowa, he will be disgusted with the sands of Florida. He will not find the clays and muds of Ohio and Kentucky. Come from where he may, he will find a change from all he has before seen and known. He will not see fields of hundreds of acres waving with wheat, oats, barley and corn, nor four horses hitched to a gang of plows turning over ten acres of soil in a day, or to a reaper that cuts and binds ten acres of grain in a day. The grain seeder is not seen in the field. Come from where he may, expect what he may, he is sure to find unexpected changes. With superficial knowledge, he will declare the ridges and dry grounds barrens, and the flat lands swamps. So he makes up his mind in a day and nothing can change it. Back he goes, and talks and writes in his ignorance. Florida is better for his absence. Some come expecting a change; they find more than they expected. They investigate the causes, learn the capabilities of the State, and become permanent residents, and, improving the State, better their own condition.

CLIMATIC CONDITIONS OF FLORIDA.

Florida differs from all other countries in its climatic conditions, and differs in its portions from each other. No other State east of the Mississippi extends through so many degrees of latitude, and from its situation and shape each degree differs from the one on either side in climate, and the plants and trees necessarily differ in each. These differences should be carefully studied by the would-be settler. Each of these portions will be separately considered.

NORTHWEST FLORIDA

Embraces the counties west of the Suwanee River and north of the 30th parallel: Hamilton, Madison, Jefferson, Leon, Gadsden, Wakulla, Liberty, Jackson, Holmes, Washington, Walton, Santa Rosa and Escambia, and parts of Calhoun, Franklin and Taylor. Frosts occur here each winter, but seldom sufficient to kill oats sown in November. Snow has been seen on the ground, but never lies one day. This portion of the State is on the outlines of mountains of Georgia and Alabama, and the land runs up in ridges nearly 400 feet above sea level. The clay soils were covered with deciduous trees, and the more sandy with pines. The oldest plantations for cotton were made here, and one sees much "old-field" land, which can be easily restored to more than pristine fertility; and the climate will enable the careful farmer to produce two crops each year on the same land. Cotton and corn are still the staple crops, but oats and rye are grown for pastures and for their fodder. Sweet potatoes are grown by all farmers for family use and for feed of stock. Irish potatoes and garden stuffs are grown extensively, and give good yields. Peaches, pears, figs and plums are among the fruits, and olives and grapes may be added. The old fields abound with good blackberries. Beans and peas may be made staple crops, and the cow pea is grown for food and to fertilize the soil. The European walnut and chestnut, and the American pecan have proven thrifty wherever tried. Though the winters are mild, warm clothing and houses with fires are required for comfort. Water in wells is generally sweet and healthful, and the general health is excellent. Owing to the manner this region was settled, and has been managed, improved lands may be purchased here for less than the cost of clearing; and good culture would develope great possibilities for this region. Vast tracts are still covered with primitive forests of great value to the lumberman, and can be cheaply purchased. This region is traversed by a railroad terminating at Pensacola, the best harbor in the Gulf.

NORTHEAST FLORIDA.

East of the Suwanee River, and north of the 30th parallel, lie the counties of Suwanee, Columbia, Baker, Nassau and Duval, and the north portions of Bradford, Clay and St. Johns. A divergence of the isothermal lines to the north from the parallels of latitude, on the Atlantic coast, separates this portion from the northwestern, and the native vegetation is indicative of the change that has taken place. The surface of the land lies flatter, and is wetter, but all can be readily drained except such as lies on the level of the St. Mary and St. Johns. Much organic matter has gathered on the soil of this portion, notwithstanding the fires that yearly run over the open grounds; and a rich soil is generally found. When these lands shall have been drained and planted with proper grasses, pastures and meadows will exist here, excelling the celebrated Blue Grass Regions of Kentucky, because they are never frozen, and will be always green and growing. The best system of drainage and improvement would embrace large tracts to secure ample drains. Sea island cotton and corn have been the farmer's staples, but with proper drainage, so as to bring the wetter and richer soils into cultivation, and by the use of cattle and applications of the muck everywhere abounding, gardening and truck farming will become more successful. The railroads and navigable rivers give to this region facilities of transportation unequalled elsewhere. Oranges are successfully grown in favorable locations, notwithstanding the winters are subject to light frosts, and warm houses and fires are necessary to comfort. Further experiments in agriculture will here develope immense resources; and lands now cheap, considering quality and locations, will rapidly increase in price as improvements advance. In this belt are the seaports of Fernandina and Jacksonville. Considerable of the native forests is still standing, and lumbering is still carried on with profit and advantage. Pure and healthful water for drinking and culinary purposes may be secured from wells constructed with brick or artificial stones laid in waterlime cement, to shut out surface drainage.

NORTH-CENTRAL FLORIDA

Lies between the 29th and 30th parallels, embracing the counties of LaFayette, Alachua, Levy, Marion and Putnam, the southern portions of Calhoun, Franklin, Taylor, Columbia, Bradford, Clay and St. Johns, and the northern half of Volusia, and small parts of Hernando and Orange. This is the base of the peninsula, and the climatic conditions of Florida largely prevail. The eastern part is lower than the western, and the winters are a little warmer. A high ridge rises up in Alachua, and extends south, on which much first-class hammock and pine land is found, adapted to growing fruits, vegetables and general farming. The only lands not susceptible of drainage are the tide marshes, and near the beds of the Suwanee, Ocklawaha and St. Johns. When drained the low lands would show a soil of high grades for agricultural purposes. Though not adapted to the growing of oranges, their products need not be less remunerative. Frosts are felt every winter, but seldom sufficiently severe to do serious injury to orange trees. Many producers, for safety, prefer to gather their fruit early in December, and garden planting is generally delayed till January. Strawberries commence to ripen early in February, and the more hardy vegetables are also in the markets. Oranges, China peaches and pears and Japan persimmons produce well on all the dry lands of this region. Lime rocks crop out in the highest ridges, cavernous below, into which well-like openings frequently occur and streams of water pour. Clays suitable for brick are at many places. Water found in the wells is generally sweet and pure for drinking purposes, and except in a few places this is a very healthful belt, and presents many inducements to settlement. Though people may here be found living in very open houses, yet warm and close houses with fires are needed for comfort during the winter. Transportation by the St. Johns, Ocklawaha, Suwanee and the railroads that intersect this region, and the climate, soil and capabilities of production have secured a more rapid settlement than in any other portion of the State during the past five years, and the prices of lands have increased accordingly. Many tracts are yet covered with native timbers, and there is plenty of work for the lumberman, and at profit. Like all the peninsula, the atmosphere is daily cooled by oceanic breezes, and refreshing showers are frequent; thus, summer becomes the most genial season of the year to the inhabitants. On either coast of this belt the botanist first finds trees and shrubs of tropical growths, showing a climate warmer than farther north.

CENTRAL FLORIDA,

Near the centre of the State, north and South, a region between the 28th and 29th parallels, of great capabilities is reached. It is a pity that writers and people insist on calling it "South" Florida. Central is better because it is truer. The climate is decidedly Floridian. The number of tropical trees and plants has increased upon the shores. The northern divergence of the isothermal lines from the lines of latitude still continues, but not as great as in the north. The high lands in Hernando and Sumter are in some measure in this divergence. The ridge east of the St. Johns, though dry and well drained, is not sufficiently high to produce any marked effect upon its climate. The dry lands of this belt are *par excellence* the orange belt of the State, if its inhabitants are to be believed, and it may be hard to disprove their claims This is the narrowest portion of the peninsula, which may also tend to modify the temperature.

The counties of Hernando, Sumter and Orange, the southern portion of Volusia, and the northern of Brevard, Hillsborough and Polk, constitute this region. In no portion of the State is there greater diversity of soil, consisting of rich, dry hammocks of hard woods, dry ridges of large pines, and an undergrowth of willow-leaved oaks, dry ridges of black-jack oaks and white sand scrubs; lower lands covered with scrub palmettoes, flat woods, prairies of grass and cypress marshes, generally capable of drainage, are found in each county. Great diversity exists in all the counties. In Hernando rocks are seen cropping out, with sinks reaching the caverns below, and rivers belch forth from unknown depths. Rich hammocks invite labor to clear their black soils and reap the harvests of cotton, corn and fruits. So in Sumter, rocks, hammocks, deep caverns and belching springs, creeks, brooks and rivers wind through ridges, hills and marshes, and often spread into lakes of clear open water. Orange county slopes towards the St. Johns and the Kissimmee, and is largely dotted with lakes and ponds, protecting vegetation on their banks from the effects of frosts.

In early days, after the cessation of Indian hostilities, settlers who had reached this region, were content to tend cattle and raise cotton, corn and sweet potatoes. Orange trees were planted by the women near the house; yet, though they were moved as often as the new house was erected, they grew and bore fruit—such seedlings as nowhere else grew. The success of these accidents, and the work of a few far-seeing men who planted not a few trees near the house, but acres, and the amounts they have produced have been as infectious as the small-pox, and orange fever rages throughout the belt. Cotton is forgotten, cattle are forgotten, corn is forgotten, sweet potatoes are forgotten. Buying lands, clearing lands, planting and cultivating orange trees, engrosses the attention of the whole people. Some design to hold, many to sell and buy again; grafters and sellers of fertilizers are everywhere, and smooth words slip from oily lips, and dollars change hands. Land agents are on every corner, and persistent as hotel runners, and every stranger who stops over a day is sure of taking the disease. If smooth words fail, climate and fine trees and better fruits are generally efficacious to produce the inquiry for a location; so lands improved, lands unimproved, lands with bearing groves, lands just planted to trees, small tracts and large tracts, wet and dry, lake fronts and behind hills, find purchasers, and immigration is reaching flood tide. They come from every quarter, by sea, by water, by railroads, in lumber wagons and on foot. The houses of the new settlers are full, and some men sleep by camp fires. Talk not of the rush to the newly discovered gold fields, these people come to stay. Each and all desire to stop in Florida covered with a climate worth millions of dollars. What may be seen daily is a marvel, a work-wonder, and cannot stop till the whole is an orchard, a garden, a field dressed in living green.

SOUTH CENTRAL FLORIDA.

Here, south of the centre of the State, between the 27th and 28th parallels, lie the counties of Hillsborough, Polk and Manatee, the south portion of Brevard and north of Dade, with a climate even more genial than in Central Florida, and much soil not inferior. On each shore the tropical trees and plants have increased largely, plainly indicating a nearing to a frostless region, and yet without increase of isothermal heat, only a warmer winter. Orange trees planted here, as in Central Florida, by the women near the house, have reached dimensions and capabilities unknown in America—10,000 fruits to a tree grow year succeeding year. These trees and grape fruits of equal dimensions mark the spots where once stood the block houses of the "armed occupationists," before Billy Bowlegs surrendered and was carried west of the Mississippi. Those early settlers, like their cabins, are gone. The cry of alarm, the hurried rendezvous to the stockade, the crack of their guns, the stockade itself, dignified by the name of "fort," are things of the past. Few of the men and women of those days remain. Even their history is unwritten. Will it ever be? But these beautiful mementoes, planted and nursed by fair hands, remain, proclaiming not only where stood the rude log house, where curled the smoke of the pioneer, but also that the orange tree has here found fifty years without killing frosts. One stands in the shade of these and other orange trees, seeing grape fruits and shaddocks, supplemented by lemons and limes, guavas, alligator pears (*aguacates*), mangoes and several varieties of the custard apples (*anonas*), and he wonders why this region has not kept step with the counties of Alachua, Marion and Orange. Its soil is equally good, its locations as healthful, its water as pure, its rains as equally distributed and abundant, its winters milder, its vegetation more continuous, its seaports Tampa and Manatee are at the heads of the safest harbor in the Gulf of Mexico, its fisheries are equal to the best, its roads, except in the neighborhood of the heads of the St. Johns and the Kissimmee, are unimpeded by great rivers, marshes, barren sands, or high and difficult ridges, its hammocks are as rich, its pines as large, its soils stoneless and easily enriched with vegetable matters from its ponds and marshes, or produced on itself, its fruits are sweeter, richer, and possess a world-wide reputation, and its gardens can give forth their yield before those of Alachua are in bloom. Destructive cyclones and tornadoes have never devastated it, and until Nature's laws shall change, they never can. When climate, healthfulness and capabilities are considered, lands here are cheap, very cheap.

Want of railroad transportation has kept this region away from the markets of the world. Where bold pioneers settled and, in part, developed the region, capitalists have followed, a single railroad has pierced it, and its advantages are being seen and felt, and other roads are pointing towards it. All its lands, except in the beds of large rivers, may be drained where needed, so that in this most choice of Florida climate there need be no waste land, and experiments will in the near future develope some of its vast capabilities. If its oranges are superior, its climate will admit the more tender lemon, lime and citron to grow, and produce better and more profitable crops. Sugar cane perfects in this belt to tasselling, and is seldom affected by frosts. As in Japan, two crops of rice might be produced in a year. Sweet potatoes are to be had from the fields at all seasons of the year. Ten tons of casava roots may be taken from an acre of land as a single crop, and alfalfa once started on dry ground, or guinea grass once set, may be cut eight times in a year, giving a ton of hay to the acre at each cutting. The great need of all this region is small farms and abundant people.

In this region lies the northern half of Lake Okeechobee, the valley of the Kissimmee, and many lakes and streams, large and small, upon which the Drainage Company are operating.

SEMI-TROPICAL FLORIDA.

Between the 27th and 26th parallels the whole region is flat, and much of it requires drainage to be rendered tillable, and then its soil will be rich in vegetable matters, and produce immense crops of sugar cane, rice and grass. In its present wild state it is a great cattle range, but will be more valuable for use by improved and intelligent agriculture. On the east are the small inlets of Jupiter and Worth, and on the west side are the great harbors of Charlotte and Carlos, shut in by the large islands of Sanibel, Captiva, La Costa and Gasperilla, and inclosing Pine and other islands. The mouths of the Miakka and Peace Rivers and the whole of the Caloosahatchie, the south half of Lake Okeechobee, a small portion of Manatee, and the north of Dade and Monroe Counties are in this belt. Frosts are seldom seen. Along the east coast is stretched the highest section of the Coraline rocks that once formed the eastern rim of the ancient atol, of which Okeechobee is the modern remnant, and on which pine-apples and cocoanuts are being grown. This ridge, notwithstanding its rocky soil, will fill up with a successful race of horticulturalists and gardeners The rich hammocks along the rivers in the west, and the well drained pine lands, are admirably adapted to the growing of the guava, lemon, lime, mangoes, sweet and sour sops and other custards, cocoa-plums, dates, tropical pawpaws. Cocoanuts, bananas and pineapples flourish and fruit here, and especially on the large rich islands and keys. Much valuable land may be added on both coasts by drains and dykes, cheaply constructed on which bananas, sugar cane, rice and garden vegetables will prosper during all seasons of the year.

The wet condition of the surface is as much due to the rank aquatic vegetation clogging and choking up the channels of drainage as to the flatness of the surface. The surface of Lake Okeechobee, into which all the waters from the north, east and west run, is known to be more than twenty feet above sea level, and yet from the Atlantic it is only twenty-six miles, or, over nine inches fall to the mile, if a straight channel were cut from Jupiter into the lake. Without entering upon a discussion of the hydrographical problem it is left with the remark that the drainage of the region is possible, without the use of pumps, as in the case of the Zuider Zee, in Holland.

The region is healthful now, and there can be no good reason given why drainage should change its character in that respect. Good water for drinking and domestic purposes may be secured with cisterns or cemented wells. The vast capabilities of this region are sufficient to demand the careful consideration of moneyed men, as well as poorer ones, desirous of escaping from the rigors of the colder regions.

SUB-TROPICAL FLORIDA.

South of the 26th parallel, covering the main land and keys east and west, lies a region nearly as unknown to white men as the interior of Africa. A few settlers have located upon the main land near the Miami, and on the keys that form Biscayne Bay. Most of the remnant of the Seminoles left in Florida have found a residence with their cattle, hogs and slaves upon some dry islands in the everglades, where they raise corn, beans, squashes, melons, sweet potatoes and other vegetables at all seasons of the year; but their trails to and fro are unknown. The shores are unsurveyed and unmapped, and the channels, except near Cape Florida, uncharted by the General Government. Prior to July, 1840, when Dr. Henry Perrine was murdered by the Indians on Indian Key, he had often visited the main land at different points, carrying seeds and plants from Yucatan and other tropical regions, and planted them out, many of which have survived and been since found by the later botanists visiting the region. All records of those planted perished with the doctor. The wreckers know some of the channels, and have landed on what they suppose is the main land, but their reports are unsatisfactory, if not unreliable. From the reports of the few botanists who have ventured there, the student of nature can infer that wherever the soil is adapted to their growths, the vegetation is as tropical as on the Bahamas, and most of the vegetations of Cuba can be grown, and that this region is frostless. The unsalted waters of the everglades prove that they are above the sea level, and drainage is possible, and the needed drains will make water communications in all directions through this region, and that when drained the soil must be of the richest character, the climate so equable that vegetable growths must be continuous, as in the tropics, and as far as information can be obtained, no portion is malarious. For the production of sugar it can have no region superior, and in bananas it must rival the Balize. Cocoanuts and pineapples will thrive on all its shell banks. Such a region cannot long remain unsettled.

TROPICAL FLORIDA.

Notwithstanding the assertion of persons illy informed that no portion of the United States has a tropical climate, it may be safely said of all the keys south of Biscayne Bay, beginning with Key Largo, they are frostless. The map of the Signal Service from 1871 to 1880, inclusive, has placed the keys for January at 70 degrees and above; for December at 72 degrees, and for the year at 76 degrees, showing plainly a tropical climate. These keys, once coral reefs, are covered with a thin soil, and as might be expected, the vegetation is purely tropical. In time they will be given up to the production of cocoanuts, pineapples and other tropical fruits. Fresh water is found only in cisterns and crevices in the rocks, or may be distilled from the sea in the manufacture of salt. Horticulture and fishing will constitute the pursuit of the inhabitants, and their communication with the world will be by the shallow-draft boats through calm channels and sounds that separate them from the main land, unless a line of railway shall be laid along them to Key West.

THE SOILS OF FLORIDA.

In no respect is the new comer to Florida more likely to be mistaken than in the soil, if he bases his opinion upon appearances, and compares it with the soils of other regions with which he has been acquainted. To thoroughly understand the character of any soil, the constituents of which it is composed must be known, and for that purpose account must be taken of its geological formation and derivation. The unnumbered ages that have passed since the azoic rocks were separated from the atmospheric vapors, and the waters on the earth's surface have been working changes. Earthquakes and convulsions have raised the highest mountains and continents from beds of oceans heated hotter than the waters of the Mexican Gulf even into the Arctic Circle; excessive colds have sent Greenland's glaziers down to the valleys of the Ohio and Potomac, carrying gigantic rocks, gravels, sands and clays over the Canadas and Northern States; the eroding powers of rains and rivers, greater than those known at the present day, have deposited gravel, sand and mud on the shores of oceans, and the grinding forces of waves, and the growth and decay of vegetations, through the unknown periods of geological ages, since before the carbonaceous periods, must all be considered in making estimates upon the soils of Florida. All these causes have contributed to the soils of this State, and, as with the climate, heterogeneity is the rule.

In the highlands of the Northwest the soil may be traced to the combined washings from the Appalachian chain, and the action of ocean waves upon those washings. The soil, as might be expected, is sand and clay, ground and mingled with the dust of lime rocks and ocean shells, rich in potash, soda and phosphorus, and tinged with oxyde of iron. The high lands of the divides of the peninsula, by a convulsion of the earth, have been lifted from beneath waters that united the Gulf and the Atlantic, which brought up the rocks of the tertiary formations, with the sands and muds, mingled with large quantities of the white grindings of phosphoriferous and calcarious shells indistinguishable in color from the sand, though discoverable by feeling and chemical observation. So difficult is this detection that it may happen that soil containing fifty per cent. of matter soluble in acids will be pronounced pure white sand and barren by the superficial observer.

From the manner the surface of Florida has been formed, great diversity in the character of the soil might be expected, and accordingly, adjoining a rich productive soil may be a white sand bed unproductive. A dry porous swell may be bounded at a few feet by wet land nearly impervious to water, or a cypress swale. The rich soil of a hammock may lie beside the black-jack ridge. So great is this diversity that nearly every forty acre tract contains more than one variety of soil.

The hammocks with a subsoil approaching clay contain considerable potash and phosphorus in their soil derived from the leaves and decayed wood of the trees and vines, and are naturally the richest soils. Next to these, and by many preferred on account of their healthfulness, are the dry lands on which the long-leafed pines grow large, tall and straight, with an undergrowth of willow-leafed oak, black oak, and in moist places persimmons and hickories. These lands are easily cleared and enriched, and being indisputably healthful are generally chosen as places of residence, and for planting to oranges and other fruit trees. A third class of land of large capabilities has a more compact subsoil, nearly impervious to water, and during the rainy seasons water lies on or near the surface, giving rise to a growth of saw palmettoes, small, scrubby pines, water oaks, gall bushes, weeds and grasses tending to the aquatic. The bayheads and cypress marshes belong to this class of lands by reason of their compact subsoil. Such lands can be cleared of surface water by open drains, and possessing a fair proportion of decayed vegetable matters, will produce grass, rice, sugar-cane, and corn and sweet potatoes will thrive on the drier portions. Good gardens can be made on these lands. Good water may be obtained on all drier tracts from wells with cemented walls. On the lowest tracts of these lands water stands, and the grasses and aquatic weeds constitute the wet prairies. The sand scrubs present a surface of loose white sands, with a growth of the spruce pine (*P. clausa*). dwarfed varieties of the willow-leafed and live oaks, and several shrub-like bushes found nowhere else. From the fact that these lands are saturated with water during heavy rains, and oozing springs at such times break out near and below them, it may be safely inferred that impervious beds are beneath. These present many appearances of having been once sand banks on the shores of an ancient sea. At present they are considered the most valueless of all Florida lands, and if cleared they might become sand dunes. Perhaps they could be utilized by planting them with the *pulque agaves* of Mexico, or the sisals of Hondurus, for their fibre products. It has also been suggested that hills for melons, squashes, etc., might be fertilized upon them, and the vines allowed to spread over the barren sands. Whenever these scrubs lie on high grounds, it is presumable good pure water may be obtained in them by cemented wells, and as places of residence they will be healthful. However, they are not likely to receive much attention for agricultural purposes until all other lands are occupied.

PRODUCTIONS OF FLORIDA.

Florida, from its geological formation, cannot ever become a mining region; therefore, its productions must be confined to the harvests from its seas and its soils. Of the fishes, little need be said beyond the fact that for variety, quality and quantity, the waters washing its shores produce them more abundantly than those of any other State.

But it is in the products of the soil where Florida's pre-eminence will appear. Before the war crops were produced by slave labor. Agriculture here was but an imitation of the agriculture in the other cotton States. Slaves in Florida were but imitations of the slaves of the regions whence they came, and their owners, if not themselves incapable, were indisposed to inaugurate new methods, or try experiments with new crops. Cotton was the staple for sale abroad. Corn, sweet potatoes, cow peas and sugar cane came from the fields, and pork and beef from the range, to the tables of master and slave. Cotton purchased the clothing and the few luxuries required, and because it did, no heed was taken of the climate, that in all portions of the State would have produced two or more crops in the same field and year of equal, or greater, value than the one crop of cotton. Lands were so abundant many knew not where their boundaries were; some enclosed lands to which they had no titles, and a few declared they would defend them by brute force. Valuable trees were sacrificed for a few stalks of cotton, enclosed by fences taken from Government lands. Some Leather Stockings placed themselves at such distances from other human habitations that they heard not their neighbors' dogs bark or cocks crow. Bodies had migrated from the Carolinas and Georgia, but the minds, thoughts, practices and habits had made no removals. Customs, speech and laws were fac-similes from those States. No matter where the residence nor what their climatic conditions, their rules of practice were as unchangeable as the nature of obstinate man, and only the omnipotent power of nature could hinder their execution. Indolence and procrastination, besetting sins of all men, induced the most southerly of those early settlers to leave their potatoes undug and unbanked, and they have since practiced "stand over" planting. The greatest of all changes is due to the pleasures of taste. Their predecessors, the Spaniards, had introduced the orange, and these people had tasted of their sweetness, and they planted a few seeds near their houses, and they grew and gave fruit to the inhabitants, corrected the bile from the use of too much fat bacon and smoke, and cured their sicknesses. As numbers increased from four to twenty trees they were designated "a grove." Few strangers then came to Florida, there was no market, and no more were grown than were needed for home consumption.

A GREAT CHANGE CAME TO FLORIDA.

Slavery ended and that change shook society to the lowest depths, produced other changes and the waves are yet rolling. Strangers had breathed the balmy air, had admired the climate, had eaten the oranges and other fruits, and they returned, this time to stay. Some thought they knew more about growing cotton than did plantation slaves, so they tried it and failed. But they experimented with fruits and gardens and truck raising, and great results followed. Commerce opened her doors wider than ever before. Steamboats plowed seas and rivers; railroads were laid through the land. The climate and soil were found more prolific for other things than cotton. If oranges took the lead other things followed close in their wake. Fruits and vegetables from the North grew and matured earlier, often better than there. Those from the semi-tropical regions of the Mediterranean, from the tropics of Cuba and Mexico, from distant Japan and China, met and mingled, and many of them flourished better than in regions whence they came. Corn, Irish potatoes, onions, cabbages, cauliflowers, melons, cucumbers, beets, carrots, tomatoes, egg plants, peas, beans and strawberries flourished and matured for the markets, when the regions whence they came are wrapt in ice. From the adjoining States came pecans, grapes, plums, pears, Ogeechee limes and peaches. From the tropics the list is longest and the kinds are best—oranges, limes, citrons, shaddocks and grape-fruits, improved by the climate and the changes of locations, but there came also the mangoes, the sweet and sour sops, chiramoyas and Jamaica apples, guavas, bananas, pawpaws, dates, cocoanuts, pine-apples and sapadilloes. Casava, yams, and arrow roots were added to the Florida list, with textile plants and flowers innumerable. Experiments are multiplying new plants, and new varieties come from other regions until their number exceed the seedmen's catalogues, and men are surprised at the numbers and variety they already see, and wonder when will Florida's capabilities end. The number is now only equalled by the heterogeneity of the climate and soil.

TIMBER AND WOODS.

Florida lies in the wooded region of the States and its forest products re valuable, varied and large; but large as they are, many believe, and with reason, that there will not be sufficient to supply the home wants and demands for the building and fences of the farms and gardens and for the cities and towns, that are growing up among us. The demand for boxes and crates in which to ship the fruits and vegetables of Florida, already reaching the hundreds of thousands will increase faster than the ratio of population. The demands of timber for the use of the railroads of the State will astonish those who have not studied the subject. To move the cars of our roads a year will take at the least 150 cords of wood as fuel for each mile of track, and allowing 30 cords to the acre, it will require the fuel of five acres yearly to each mile of road, and if this may be renewed in twenty-five years, it will take 125 acres to each mile to supply the fuel. In the first construction of the roads, 2,880 sleepers per mile are required, requiring the bodies of 1,000 trees, at least a oot in diameter, which will not be reproduced in 35 or 40 years. The demand for large timber for bridges, trestles, turn-tables and platforms, will be nearly as great, most of which must be renewed every five years.

To these vast amounts must be added the timber and lumber for depots, cars, and other constructions. To all must be added the timber, lumber and fuel needed for shipping, with their wharves, swelling the demands; and only this conclusion can be reached; all shipments as well as wastings of the timber of the State, are but borrowings from future generations, that must be repaid at enormous percentage. Wherever settlements have gone, along the streams on which logs can float, and railroads on which they can be carried, saws and machinery are busy in cutting up the products of the forest, and the prices of those manufactured for home consumption are rising rapidly.

The forests of Florida produce a greater variety of ornamental woods for ceilings, panels and furniture than can be found in any other State, perhaps all the other States. Beside full fifty varieties of sub-tropical trees found in no other State, growing on the keys and coasts of the mainland of South Florida, in the woods and forests of the State are found the black walnut, the cherry, the red, white, water and live oaks, the magnolias, the chinaberry, the sweet and black gums, the cypress, the cedar, the bays and palmettoes, outrivaling in colors and shades the woods of other States, and finally the pines of Florida as the finest of ornamental wood excel the brushes and stains of all the painters of the world.

IMPROVEMENTS.

At the beginning Florida was a wilderness of trees, ridges, swales, marshes and prairies. Before man could make a home upon its face or cultivate its soil, trees must be cleared off, stumps removed, drains cut, wet lands and prairies converted into meadows, pastures and fields; lands must be plowed and roots removed, soils fertilized for special crops, as sugar-cane, sweet potatoes, cotton, corn, and the produce of the gardens. All this work was as necessary and the expense as great as was the clearing of the wooded regions of the northern regions. The sweet oranges and delicious fruits could no more flourish in the woods or wild untamed soils of Florida, than could apples, pears, peaches and plums in the wilds of the North. No portion of Florida was in the condition of the open dry prairies of the States at the heads of the Mississippi, by nature ready for the plow, where to rear a crop of grain only fences were required, and in many places even that was dispensed with.

True, the Spaniards landed on the coast of Florida before the English entered Chesapeake or Massachusetts Bays, or the Dutch had entered the Hudson. San Augustine was founded before Jamestown; but those Spaniards were no more equal to the task of subduing the Indians of Florida than were their brethren those of New Mexico. They were also unequal to cope with the wilderness. In 1820 Florida was ceded to the United States by treaty and confirmed in 1821. Tampa was taken possession of by Colonel Brooks July 4th, and the Spanish flag was lowered to that of the United States on the 10th at St. Augustine. Pensacola, Fernandina, and Fort Gadsden being already in the possession of the American troops, with short intervals of peace the Indians continued to receive the slaves of the whites, and break out in wars, rendering settlements and improvements unsafe and impossible. In 1835 Osceola lead a general Indian outbreak, beginning with the deaths of General Thompson, at the Indian agency, and Major Dade and his entire command of 139 regulars, on the same day. That war lasted seven years and was finally ended by Gen. Worth, who convinced the Indians that all places were as accessible to his soldiers as to themselves, and that they knew no reasons for cessation of hostility. Only about 300 Indians remained in the State and they in the Everglades. This war had taxed the resources of six or seven generals, and cost the United States about $20,000,000.

The Indian wars were ended; but the governing power, slavery, was not the aggressive power to subdue the soil fattened by blood from the day Menendez butchered the French at Fort Caroline, till General Worth announced the Seminole hostilities closed. The rich lands of "Tallahassee," of Alachua and Marion, had attracted the planters of cotton, and a few had reached Peace creek and rivers of Tampa Bay. Florida was just attracting the attention of the world when another war was precipitated upon the State and more blood was poured upon its soil. But happily all the causes are gone; and the State that had languished by bad government and bloodshed for three hundred and seventy years now bursts upon the world like its most beautiful orange trees, in flower and fruit.

HEALTHFULNESS OF FLORIDA.

Florida for many long years has been proverbially healthful for the well; and since it has become the resort of the sick, it has lost nothing from that reputation. Long tables have been published giving the temperature, comparative humidity of the atmosphere in certain locations; comparisons with other places and regions, sometimes comparisons of one place or portion of the State with another place or portion, designed to build or pull down as the case may be. To the student of statistics, these may be interesting, and from them he may build theories; but the common reader is quite apt to skip them; and turn to facts and proofs deduced from these, or gathered from other sources, if not broader and more comprehensive, more easily understood than readings of the thermometer, the barometer, the anemometer, or the speculations of specialists at fixed localities. A location of small extent may be healthful, while all the surrounding region is the reverse. The question for Florida is not whether a township or even a county is healthful; but what is the condition of the State; the largest, most heterogeneous east of the Mississippi river.

Every man about to make Florida his future home, as well as he who has already done so, desires to have valid reasons for his choice, and desires other than mere tables that he must exhibit and explain, condense and abstract. We propose the following other rules as guides for determining healthfulness:

First. The temperature of the State should be as equable as possible throughout the year; of sufficient warmth to induce the longest periods of vegetable growth, and yet not so hot and humid as to relax the human system or prostrate with sunstroke, to form the most desirable location for human residence.

Second. Experience seems to centre upon a temperature of about 75 deg. F., as most agreeable to man and beast, and best for vegetable growth.

Third. For human comfort and for the best growths of vegetables, an average humidity of 70, when 100 represents saturation is preferable to any other degree. That humidity keeps the pores of the skin open, and yet absorbs perspiration rapidly enough to prevent the effects of relaxing heat and saturated clothing. With that degree of saturation, a depression of ten degrees of temperature, reaches the dew point, when farther depression ceases, the latent heat of the invisible vapor becoming positive, and thus the temperature of the nights also become equable.

Fourth. Seventy degrees of humidity is favorable to the formation of clouds, and rainfall in day showers; also to a constant supply of atmospheric electricity, purifying the atmosphere and rendering it healthful.

Fifth. A region of high atmospheric pressure as indicated by the barometer is preferable for residence to one of low pressure. With a high pressure men and domestic animals feel better physically, and are capable of performing the greatest mental and physical exertion. Low pressure produced by the atmospheric waves preceding storms, or by elevation, has an enervating effect not greatly dissimilar from sickness, causing increased pulsation of the heart and difficulty in breathing.

Sixth. A region with just sufficient elevation to give free drainage, but without high mountains or long elevated ridges whose trend is across the wind currents and would break the free passage of the winds, is preferable for residence; because such a country will be free from stagnant water, and its atmosphere will always be pure.

Seventh. The region must be free from volcanic vapors and earthquake shocks.

Eighth. A country over which currents of winds pass from the ocean, well charged with vapor to keep up the proper degree of humidity, and thus supply the region with needed rains and dews, is preferable to one far inland reached only by winds that have passed over mountain ranges, or long extents of land where they have parted with much of their humidity.

Now suppose a man having these rules in mind, and intending to select a residence, should commence his researches of the world.

The equatorial regions are first presented to him for their equability of temperature; but at sea-level he finds the isotherm of 90 degrees and humidity 90, with a barometric pressure of only 28 inches, when the general pressure of the whole earth is about 29½ inches. This region is to be rejected because the climate is too warm, the atmosphere too humid, and the pressure too low, and altogether too relaxing and enervating for vigorous mental and physical exercise. Passing inland and up the mountains, he will reach the proper temperature, but the pressure and humidity are decreased, until dews scarcely fall, and droughts are frequent, even preventing vegetation. From want of humidity the dew point is sunk very low, perhaps too near the freezing point, and injurious to vegetation; and the human system suffers from the effects of the low pressure and cold. The searcher must therefore leave the equatorial regions.

He next examines the regions near the tropics. On the Canaries he finds a narrow belt near the seashore of perhaps marshy soil, lofty mountains hindering the free circulation of the northeasterly winds, creating hot valleys and cold currents from mountain tops. The larger West India Islands are obnoxious in part to the same objection, and the average temperature is still too high with a consequent barometric depression. The continents have low, but hot, malarial shores, high mountains and elevated plains, arid atmosphere and low pressure from elevation; and though the proper thermal line be found, they too must be rejected.

He next examines the belt north and south of the tropics up to the 31st degree. In the south he finds the continent of Africa rising rapidly from the ocean to a high plain of an arid character. The continent of South America gives the southern part of Brazil and the Argentine Republic with the valley of the La Platte with rich alluvial soils, and stagnant currents of air in summer when the southeasterly winds are dammed back by the high range of the Andes, and in winter the southwesterly winds, chilled from passing over the same high range, sweep over it. The pressure is high but there is too great variation in temperature. The balance of this belt lies in the high mountains and plains of Bolivia and Peru. The portions of Australia in this belt are too arid and hot in summer.

North of the Tropic of Cancer lie the dry arid plains of North Africa, where the thermometer varies from 120 degrees by day to 60 degrees at night in summer, and to the freezing point in winter. Arabia and Persia, are equally arid and the temperature as variable. The pressure is high, but humidity is defective, and temperature bad. Passing farther east, a region of too great humidity is reached, and the atmosphere, stagnant from the highest of all ranges of mountains, is loaded with the breath of disease, and enervation saps the human system.

Turning to the south of Texas and Mexico, and as soon as the shores of the sea are left, the region rises up into plains and mountains dry and barren from aridity. Pressure is diminish edby elevation, and irrigation is absolutely necessary for all cultivation.

Florida alone remains, and he turns to that and its climatic conditions are investigated. Laying before him the maps of the isothermal lines prepared by Lieutenant Greely, of the Signal Service, from observations during 1871 to 1880, he searches for the isotherm of 75 and its co-relatives. On the map for January he finds the line of 55 degrees drawn in almost straight line from Pensacola to Fernandina. The line of 60 degrees passes from Cedar Key to Daytona; 65 degrees is at Charlotte Harbor, and 70 degrees at Key West, and he would expect occasional frosts nearly to Charlotte Harbor.

On the map for February the line of 55 degrees is still at Pensacola, but the east end is at Savannah. The line of sixty is now entirely north of the 29th parallel, and its east end is at St. Augustine; sixty-five is midway between the 27th and 28th parallels, and seventy-one and a half has come to Key West.

On the map for March the line of sixty runs from Pensacola to Savannah; sixty-five is now north of the 29th parallel; seventy is midway between the 27th and 28th, and seventy-four is now at Key West.

On the map for April the line of seventy runs from Cedar Key to Daytona; seventy-three is at Punta Rassa, and seventy-seven is at Key West.

On the map for May the line of seventy-five has gone up to Pensacola and passes along the parallel of 30; seventy-seven is at Punta Rassa and eighty is approaching Key West.

On the map for June the line of eighty is at Montgomery and Savannah, and eighty-three has just touched Key West; and a narrow strip along the

Gulf from Deadman's Bay to Charlotte Harbor has a temperature of seventy-nine, owing to winds from the Gulf.

On the map for July the line of eighty is found in New Mexico on the Rio Grande, which it leaves at San Vicente, and crosses the Pecos in a northeasterly direction to the northwest corner of the Indian Territory and the southern point of Illinois to the mouth of the Wabash, thence southerly through Nashville and Augusta, and ends at Norfolk. The temperature at Fernandina, 82.7, and Key West, 83.7; but along the west coast owing to the Gulf winds it is only 81.4.

On the map for August the line of eighty is still north of Charleston; seventy-five is at Harrisburg, Pa.; but at Punta Rassa it is 81.5, and at Key West is 84. On this map is shown the line of 92.5 covering the valley of the Colorado and Gila at Ft. Yuma, in California and Arizona.

On the map for September the line of seventy-nine is at Jacksonville; eighty is near Punta Rassa and eighty-three is at Key West.

On the map for October the line of seventy is nearly on the parallel of 28.30 at Brooksville and Orlando, seventy five is at Punta Rassa, and seventy-eight is at Key West.

On the map for November the isotherm of sixty passes from Pensacola to Fernandina, sixty-nine is at Punta Rassa and seventy-four is at Key West. And finally, on the map for December the line of fifty-five is on the parallel of 31, or the north boundary of the State; Punta Rassa is sixty-five and Key West is seventy-three.

These temperatures being combined and again reduced will give for Punta Rassa, on the parallel of 26 deg., 31 min., an isotherm of seventy-six; and the desired isotherm will be found just below the parallel of 28, at Tampa Bay, and at Rock Ledge on Indian river. Here extremes have been known to vary only between 28 and 98, and then limited to only one or two days.

But on the parallel of 28, at sea level, is also found the greatest atmospheric pressure, barometric measures being reduced to sea level and temperature to the freezing point giving a pressure of 30.5 inches as the average; and in Florida 29.5 inches is very low pressure.

Peninsular Florida lies without any obstructing high ridge to the free passage of the winds from the ocean or gulf; and those winds, coming daily from the warm waters of gulf and ocean, bring a high degree of humidity at all seasons. Considering also that with such humidity, the dew point is reached by a few degrees of depression of temperature, and farther depression is then arrested, the temperature of day and night are equalized as nowhere else; and heavy dews and generous rains result.

The elevation of the entire State except low lands bordering on tide water, is sufficient for perfect drainage, without affecting the free passage of the ocean winds.

The high pressure of the atmosphere effectually prevents the gathering or passage of destructive winds between the parallel of 26 deg., 30 min. and 29 deg., 30 min., and there is no evidence of a destructive earthquake having been felt in any portion of the State. When these facts are considered and their consequences applied to Florida, the healthfulness of the State must be conceded, with the invigorating influences of its high atmospheric pressure giving new life to diseased lungs and limbs. The genial warmth and humidity produces an almost perpetual growth of vegetation, developing the capabilities and productiveness of the soil. Viewed from every standpoint, climatic, physical, temperate and healthful, the careful observer can reach but one conclusion: Florida possesses more advantages than any other State or Territory in the United States, and as a place for the comfortable residence of man it has no equal in all of earth.

COST OF LIVING IN FLORIDA.

It has already been shown that in every portion of Florida two or more crops may be produced upon the same piece of ground each year; and there is no week in the year when all kinds of stock may not gather their food in the field, or the field afford some crop for the scythe and the green soiling of cattle. All the dry lands are as cheaply cleared of trees, brush and roots as were the oak openings of Michigan or Wisconsin, and the soil of this State is more easily plowed and worked, and when the proper amount of fertilizer has been applied in the shape of vegetable matter it will produce as many bushels of corn per acre. The soil contains all the mineral elements of plant food and only needs the addition of humus, of which it has been deprived by the yearly burnings, to bring about its double and triple crop productiveness. The climatic conditions give to it sufficient heat and moisture for vigorous vegetable growths; and yet crops are seldom injured by excessive rains or droughts. There may happen seasons when some plants or trees might be improved by artificial waterings, but such are exceptions not the rule. The great want appears to be rather want of knowledge of when to plow and plant, and what to plant, than want of rain and warmth at the proper seasons. Two seasons of dry weather may be calculated upon; one commences in April and ends in early June, the other in October and ends in December. The summer rains are heavier than the winter, as the heat is then greater. Evaporation is then greatest and the temperature is reduced, so as not to become oppressive, and the breezes render the shades pleasant and agreeable during the brightest days. Sometimes the summer droughts, so injurious to the cotton and crops of Alabama and Georgia, reach into the northwestern belt, but are seldom severe in their effects.

These seasons of rains indicate that those plants not very sensitive to frosts and not requiring a high degree of temperature, such as peas, turnips, beets, onions, lettuce, cabbage, carrots and Irish potatoes, may be placed in the ground at the beginning of the rainy season in October and November. During December and January, the darkest and coldest months of the year, the clear and fair days, according to the signal service average forty-eight to only fourteen cloudy ones. The lowest temperature noted by that service has been at

Jacksonville,	for	December	19,	and January,	24.
Pensacola,	"	"	28	" "	16.
Sanford,	"	"	36	" "	46.

Jacksonville and Pensacola are near the 30th parallel, and at those places ice is sometimes found on shallow water, but at Sanford on the parallel of 28 deg., 35 min., the freezing point has not been noted, though white frosts have been seen every winter. The warmth increases as the latitude decreases, and tomatoes and egg-plants may be protected south of the 29th parallel. Corn, squash, melon and cucumber plantings may commence in the belts south of the 29th parallel, the first of January and thus escape the droughts of May; and beans will follow a month later. December and January are the best months for planting out fruit trees, as they are then dormant. Oats and rye are sowed by the first of November and harvested in April, unless they have been pastured or cut for fodder when they begin to show heads.

All land planted before the 15th of January, except with crops not yet ripened, should be plowed in March and April, and fertilized liberally with vegetable matter. Summer crops of corn, cotton, upland rice, cow-peas, pumpkins, melons, sweet potatoes, peanuts, jute and fodder grasses are then grown; and thus the second crop taken from the land before it is time to again prepare for the winter crops.

Sugar-cane should be planted in December, the seed having been kept from the frost, in soil highly fertilized with vegetable matter, potash and bone meal, and the yield will run from an average with Louisiana to one with Cuba. This crop remains as long as the fertility remains, or is renewed. Cassava, richer in starch than any other root crop, requires a dry soil, of fair quality, thoroughly plowed ten inches deep. The planting is done by stems preserved from frosts in December. The best distances are in drills of five feet, and two feet in the drill. Irish potatoes, garden peas, or turnips may be planted between each row. Cultivation must be shallow to prevent injuring the starch roots that spread out horizontally near the surface of the ground. Good roots may be obtained the first year, but it is as well to let the plants grow two years; 20,000 to 40,000 pounds of roots can be taken as a year's crop from land that would not produce more than ten bushels of corn per acre.

In Central and Southern Florida the plantings may be so disposed that three and four crops may be taken from the same field in the year, and thus each acre in cultivation made equal to three acres in those States, where the climate only allows the growing of a single crop in the year.

Varieties of grass may be grown in all portions of the State, that will give good pasturage during the coldest seasons to cows, sheep, goats and other stock; and thus the expense of securing fodder for them, also of sheds, barns and stables, may be in a great degree saved. The climate in all parts of Florida is sufficiently mild to admit of hens and other fowls laying eggs and rearing their young at all seasons. Thus there exists the ability of obtaining meats, eggs, milk and butter, more cheaply than in colder regions.

The clothing of the people need not differ essentially during the year from that required during five months commencing in May, in New England or Wisconsin. Thus there will be a clear saving of the cost of the heavy wraps, overcoats, robes and furs required for comfort and health indoors and out at the North during the seven months of frosts and cold winds.

Though ceiled and plastered houses are required here as elsewhere for comfort and convenience, and fire-places and stoves are occasionally called into requisition as far south as the semi-tropical belt, yet many people may be found living in log-houses unchinked, or in frames with only the outside coverings, often without doors or windows closed—houses not as close walled as are the stables and barns for cattle in the Northern States; yet water will seldom freeze in such houses during the coldest nights in any portion of the State. Thus the climate of Florida saves large sums in the construction of houses that shelter the people of the State; and in those portions south of the 29th degree almost the entire expense for fuel to warm the houses may be saved.

The articles of flour, groceries, etc., that cannot be raised in Florida, must be purchased from the merchants, and cost a small per cent. more than in New England, but no more than generally throughout Northern States.

All things considered, Florida may well challenge the naming of another region in the whole of the United States, where a family cultivating the soil may live as comfortably and cheaply as within her limits.

FLORIDA AS A STOCK RAISING STATE.

The opinion largely prevails that Florida is illy adapted to rearing cattle, sheep, horses, etc. Among the causes contributing to this opinion may be reckoned:

1st. The nature of original settlement of the State prior to 1860.

2d. The innutricious character of the indiginous growths of vegetation outside of the fields.

3d. The want of foresight in providing pastures and meadows on which nutricious grasses and vegetations are cultivated.

4th. The want of proper care in herding and breeding stock best adapted to the climate: and closely allied to this, is

5th. The bad legislation and customs of the State.

None of these causes being inherent in the character of the soil or climate, they are all capable of removal by mere human agency, and will each be considered.

THE ORIGINAL SETTLEMENT by the Spaniards was rather for the possession of large territories than to improve the country and elevate the human race in civilization, arts and sciences. The expeditions of Panfilo de Narvaez, who landed in 1528, near Tampa Bay (perhaps, at Clearwater or Anclote), and of Hernando de Soto, who landed in Tampa Bay in 1539, on Whitsunday, and thence named it *el Bayo de espiritu santo*, were made in quest of gold and slaves, not for settlement and improvement. The expedition of Don Tristan de Luna, undertaken with many priests and 1,500 men, and who landed at Santa Maria, now Pensacola, in 1559, was with the avowed object of christianizing the Indians, after the methods of Cortez in Mexico, and Pizarro in Peru, by compulsory baptism and making them peons at the same time. The result was the discovery of the best harbor in the Gulf of Mexico, and falling into a trap of "going to see the King of Coca," or a vain march into Alabama, quarrels, disaffections and mutiny in camp and being ordered back to Mexico. No converts were made, no peons or gold obtained. After these failures Spain would have abandoned Florida, had not a colony of French Huguenots landed on the banks of the St. Johns. The settlement of St. Augustine in 1565 can boast no higher object than the expulsion of these Frenchmen, who had settled here to escape persecutions under Charles IX of France. The work was done by Pedro Menendez de Avila, in the complete massacre of the entire settlement, and such a destruction of Fort Caroline, that its very location cannot be identified, but this founded St. Augustine.

But that settlement begun in blood, was limited to a small space near St. Augustine and Amelia Island, by Indian hostilities,and agressions from South Carolina and Georgia, partly in revenge for hostile excursions by the Spanish of St. Augustine; and by the sacking of the Ancient City by Sir Francis Drake, Gov. Moore and others; consequently stock raising at that point was very limited. Pensacola and other harbors in the channels and bays, behind the keys and islands, were for many years under Spanish occupancy; the resort of bucaneers, freebooters and pirates, not ports to settlements of agriculturists; thus Florida under Spain may be classed as a wilderness.

The possession of Great Britain, by reason of the bad management of Dr. Turnbull and his compeers, was but a slight improvement upon the Spanish rule, so far as the reduction of Indian hostilities and farther settlement of the country was concerned. During the war of 1812 Pensacola and Apalachicola became a sort of neutral ports, from which the British made excursions into Alabama and Georgia, which led to the reduction of those places by General Jackson; and the latter becoming a rendezvous for fugitive slaves, who depredated on the planters, was again subdued and held possession of by the United States till 1819, when by treaty with Spain the whole of Florida was ceded.

The treaty was confirmed in 1820, a Territorial Government organized, and the territory opened to settlement. The rich lands of what is now known as the "black belt," attracted the attention of the cotton planters of the neighboring States, who flocked to those lands with their slaves. Large tracts of land were bought by single planters; the forests were leveled or deadened; the "big house" and the negro cabins reared; the one-horse or mule sent afield, and cotton bales were sent to market to buy provisions and clothing. On account of Indian hostilities, houses were placed as near each other as the large plantations would admit. Cotton was then king and usurped the entire attention; stock was a secondary consideration, and what of cattle there were found their support on the range, then covering large extents of what were considered the poorer lands, often falling a prey to the Indians roaming over the entire State. The herds of these cotton planters were small in number and poorly cared for. In other districts and poorer soils settlers with few or no slaves, and small stocks of cattle, located in reference to the vicinity of what they considered the best ranges for their herds, even nearly to the borders of the Everglades. About the close of the Indian wars these herds had multiplied their numbers to the thousands. Shipments to Cuba had commenced previous to 1860, and been found remunerative; but the blockade of the ports from which these shipments were made put an end to the Cuban trade; the herds were too remote from the armies to be largely drawn upon for supplies of beef, and large increases resulted. In 1865 King Bos disputed supremacy in the wet lands, with king cotton on the dry. The one had held his herds, the other had lost his slaves.

A NEW ERA HAD COME TO FLORIDA,

An opening to immigration; but Florida did not lie in the line of immigration that was filling the regions of the valleys of the Mississippi and Missouri. Before 1860 there existed a growing animosity between the non-slaveholding States and the slaveholding, preventing the latter and especially so extreme a one as Florida, from receiving accessions of men or improvements from the former, except such as related to the great staple, cotton. After 1865, the ports being again opened, the shipments to Cuba were renewed and cattle rose in value.

Then the practice of weeding out the best for the butcher's shambles and for the Cuban trade, left only the poor animals to breed, and the herds rapidly degenerated to the lowest grades. Beeves of 300 pounds of meat were full average. Little change took place in the degeneracy of the animals or practice of the owners before 1875, when a few blooded animals were introduced; but owing to the existence of endemic anthrax and Southern cattle fever, improvement has gone with halting steps in the infusion of new and improved breeds.

The innutricious character of the vegetations outside of the fields has operated seriously against the cattle of Florida. Most of the natural growths partake of the character of wire-grass, coarse sedges and rushes, as to their nutritive qualities, while those which are nutricious are few and scarce, as compared to the rich natural grasses in the Northwestern States, Texas, and the plains extending into the mountains; and the yearly burning of the ranges has destroyed even this poor vegetation at a season most needed. The one-crop idea which has hitherto prevailed, added to want of knowledge of what grasses and fodder plants may be successfully grown, and the indifference to seeking knowledge on the subject, with the failures of the few who have attempted experiments without studying the climatic conditions of the State, have contributed to continue the practice of depending upon the wild growths which are yearly growing less and less valuable.

The want of foresight in providing pastures and meadows covered with grasses as nutricious as the pastures and meadows farther North, finds its excuse in the want of knowledge, also in the one-crop of cotton, to the cultivation of which all kinds of grass was inimical. The tools and farming implements they possessed were not only ungainly and clumsy, but were totally inadequate to the mastery of the grasses and weeds that sprang up behind those tools. Field after field was abandoned because Bermuda and Smut, the most nutritious of grasses had taken root in them. Blinded by flakes of cotton or scent of oranges, men overlooked the fact that on the dry lands such perennials as Bermuda, Smut, Texas blue, Guinea grass, and Alfalfa will grow and produce more feed for cattle per acre than the richest grazing lands of any more Northern State. To similar causes may be attributed the fact that the wet and moist lands have not been prepared and planted with such grasses as the Para, for mowing and pastures, and the largest of the paspalums, the St. Augustine, and other varieties that thrive in such lands and make rich and perpetual meadows and pastures, on which young cattle would thrive and cows give rich milk in abundance.

THE WANT OF PROPER CARE AND HERDING.

The method practiced by the large owners is as near total neglect as is possible, as it consists almost exclusively in a yearly rounding up, penning, or as the Western herders borrowing from the Mexicans would say, corraling, marking the unmarked and selecting out such as they think they can sell, then turning them again on the ranges till the next year's round up. Under such management the herd may not be quite as wild and unmanageable as a herd of buffaloes, but is nearly so. With such care and management there must be great losses, with no increase in the quality of the stock.

Another change has already begun. Already down to the 27th parallel settlers have been occupying the dry lands, closing in fields and farms, planting orange and other forest orchards, holding small herds with improved breeds among them. The native cattle have become domesticated and are nightly enclosed in the pens of their owners, and may be enclosed during the day in the bounds of their owner's lands. The great ranges are contracted and the wild stock is forced farther south towards the Everglades. Among the owners of these small herds a demand for better and improved breeds is increasing; for better milkers, heavier and better flesh; so one sees the small boned, gentle, easily kept Guinea, bred on the borders of Georgia, and giving milk not inferior to the Jerseys in quality. These are acclimated to the climate and diseases of the South. Jerseys may also be seen as finely bred as anywhere, that have safely passed their acclimation. Devons are also nestling on the ranges as well as the natives, but the heavy breeds like Shorthorns and Holsteins, must wait till rich pastures and grain shall have been provided for them.

THE BAD LEGISLATION AND CUSTOMS

That grew up during the early years of the settlement of Florida among the cotton planters, as to the unrestrained pasturage of cattle upon lands not belonging to their owner, are being questioned, politically and legally. Where fruit-growing and gardening prevail the custom is changing, and even the owners find it for their advantage to enclose their cattle and hogs in their own pastures. Many are advocating and actually practicing the planting of the perennial grasses in pastures for grazing, and in meadows for the purpose of cutting hay and fodder for winter and soiling their stock in summer. If this improvement shall continue as it now promises, the day is not far distant when the damp and better grass lands will be called into use and a great improvement take place in the cattle and other stock of the State.

SHEEP.

SHEEP were introduced into Florida by the Scotch immigrants who settled in the northwest, especially in Walton county, soon after the cession of the territory to the United States. The valueless curs that swarm around the huts of the poor whites and negroes, and ravenous, half-wild hogs, that prowl everywhere unrestrained, are about the only draw-backs to the successful rearing of these most useful animals. The mildness of the winters leaves the range and pastures always accessible even in the coldest portions of the State. The ewes have great fecundity and their increase may be reckoned at 100 per cent. yearly. The fine wooled lose nothing in the character of their fleeces and they thrive as well as, or better than in Spain; and thus it is manifest that all the dry lands of Florida are well adapted to the successful husbandry of these useful animals, so soon as they shall find protection by law and customs from the depredations of the dogs and hogs.

HORSES.

There is no cause in the nature of the climate and soil of the State to prevent the rearing of horses of fine stock, so soon as the pastures shall be provided and the meadows and proper grain fields shall grow the hay and grain on which to feed them.

All things considered, Florida may be classed as a stock-raising State, for cattle, sheep, horses and goats, equal to any other. Hogs requiring corn to fatten as well as rear them, must be confined to the corn-growing regions. When the climatic conditions of Florida are considered, the difficulty of curing and keeping the meat, and that pork is not a healthful food for the inhabitants of a very warm climate, nor is its fat required to keep up the heat of the human system, it is not to be regretted that salt pork is one of the imported articles in Florida.

"MIDDLE FLORIDA."

This name has been given to that portion of the State lying between the Suwanee and Apalachicola rivers, and embraces the counties of Madison, Taylor, Jefferson, Leon, Gadsden, Wakulla, Liberty and Franklin.

Under Spanish rule there were two provinces and two capitals of Florida, San Augustine and Pensacola, and designated as East and West Florida. The Apalachicola river was the boundary line. West Florida claimed a boundary on the west by Lake Ponchartrain, on the north the 31st parallel; but in 1795 all west of the Perdido was ceded to France, and came to the United States by the Louisiana purchase. The Floridas were thus limited to the present State. February 22d, 1819, the Treaty ceding the Floridas to the United States was signed by the Ministers, confirmed by the King of Spain on the 24th of October, 1820, and by the United States, February 19, 1821, and the same year the act was passed for a Territorial Government over the Floridas, and

W. P. Duval appointed Governor, who held the session of the Council in St. Augustine in 1823.

In 1821, Messrs. Lee and Simmons were appointed Commissioners to locate the seat of Government for the Territory, who, after traveling from the Perdido to the St. Marys selected Leon county as the most fertile and beautiful part of the Territory and founded the town of Tallahassee on ground which showed signs of having long been occupied by the Indians, and where it is supposed De Soto rested with his army as he made his way from Tampa Bay into Georgia. The surrounding country was one of great beauty, and the soil covered with large and thrifty oaks, hickories and magnolias, attracted the attention of settlers from the States of Georgia and South Carolina, and many of large means came from North Carolina, Virginia and Maryland, who engaged in cotton planting with their slaves brought with them. Settlements rapidly opened east to the Suwanee, west across the Apalachicola, and south to the shores of the Gulf. As East and West Florida still had a traditional existence this portion took upon itself the name of "Middle Florida," as being midway between the Atlantic at St. Augustine and Pensacola. From the beginning Middle Florida has been a controlling power in the State. How long it shall so continue remains to be seen.

Leon county holds not only the seat of Government of the State, but such a place among these counties that a description of the climate, soil, productions and capabilities of it can be readily adapted to the others. Near the Gulf coast one meets in Taylor, Wakulla, Jefferson and Franklin counties, an almost continuous succession of marshes and swamps, unhabitable for some miles. Next he sees low table lands known as "flat woods" covered with pines and cypress forests. These continue ten to twenty miles to a third level, consisting of hills, with broad fertile valleys extending into Georgia, and covered with magnificent oaks, pines, bays, magnolias, hickories and other hard woods. The Florida Central Railroad, from Jacksonville to the Apalachicola river, passes nearly east and west through Madison, Jefferson, Leon and Gadsden counties, and a branch extends from Tallahassee to St. Marks. A tally-ho line of coaches is secured from Thomasville to Tallahassee, and a company is organized to build a railroad between those places, thus securing a connection to the North from this region. The opening of the Pensacola and Atlantic Railroad has given transportation to its junction with the Louisville and Nashville system, and the Florida Central Railroad gives an outlet at Jacksonville and Fernandina, and at Chattahoochee, Live Oak and Lake City the Georgia roads are reached; water communication is obtained by the Apalachicola, St. Marks and Suwanee rivers to the Gulf.

THE RED LANDS.

Along the line of the Florida Central Railroad as it passes through this region, are the ridges rising up from the Suwanee river and culminating in Gadsden, that give to this region characteristics that make it differ from all else of Florida. These are formations by the washings from the higher clay hills of the districts north in Georgia, and are covered with a rich mold when newly cleared, filled with humus from the decomposition of the leaves of the trees, grasses and weeds that covered it. This soil, after the forty years of unhusbandlike manner in which it has been cultivated, has proved itself the richest land in the State, and may be again restored to its pristine fertility from its own productions by careful culture. All these lands were taken up from the United States as early as 1840 and most of them have been since constantly planted with cotton and corn, without any systematic fertilizing, or even a return to the soil of the grass, weeds and stubble that might have been plowed under.

THE GREY HAMMOCKS,

(In other portions of the State called high hammocks), covered with water oaks, live oaks, hickories, magnolias, and other hard woods, include much of these northern counties, all except the red lands. These with the pine lands have a soil with a larger proportion of sand and are held in lower estimation by the farmers of the region. If these produce fairly well while yet new, under the modes of culture they were soon exhausted, and were turned out to grow up with weeds and brush. Good cultivation would in a very few years renew these and make them productive. The plow and crops to be turned in alone are required.

This region of "Middle Florida," with its magnificent soil was all purchased in large cotton plantations before Florida was admitted as a State into the Union, and on each plantation were held large bodies of negro slaves, outnumbering the whites of all kinds more than two to one. Since the war, with the shiftless and improvident system of negro tenantry and neglect to plant any crop for fertilizing the soil, with the impoverishing one-horse plow and half tillage of but one crop where two or more might be grown, and the fires lapping up every blade, leaf, and stem in the fields, the proprietors have realized incomes to them satisfactory and no lands were for sale, while the poorer soils farther south were attracting immigration by the tens of thousands. The tenants knew not how to elevate the standards of cultivation; and the proprietors with fixed ideas and without desire to improve their crops or relieve themselves from the chains of the credit system, held tenaciously to their large plantations; and so no lands were for sale, and the gates to immigration and improvement were closed.

The visitor for pleasure, the seeker for health, the cultivator to escape from the rigors of winter, have passed by other ways, hurried past, nor lingered to look into this closed region; understanding that no lands were for sale, few have asked the price, inquired as to the climate, or what the capabilities of the soil.

A CHANGE IS TAKING PLACE

in this blackest of the "black belt." Many of the old unprogressive proprietors have passed away and the large plantations have been divided among heirs or passed into the hands of those recognizing the benefits of more intensive systems of agriculture, and the advantages of dense population to the country. Lands are now for sale—lands inferior to none for productiveness can here be bought, at rates that would not eradicate the roots that formerly filled the soil·and hindered the plow. The larger plantations may now be purchased by colonies for subdivisions among families, or small tracts can be purchased from them. The intelligent immigrant from the Northern States, England, Ireland, Germany, Sweden, Norway or Denmark, equipped with the improved implements of husbandry and heavy spans of draft horses, may deepen and improve the soils which inefficient negroes, with the small horse or mule and primitive implements have been butchering for the past forty years. One of those immigrants, with his teams and tools can not only renew the old fields impoverished by shallow scratching and fires, but can cultivate more lands and raise more valuable crops than could a whole family of the tenants. Cotton may lose its grip, but other even more valuable crops can take hold to find a market.

THE YEAR'S WORK.

In this region, as in all of Florida, where the ground is never bound in frosts, it is difficult to say when the year's work begins, or when the harvest ends. Seed time and harvest interlap. If October be chosen as the beginning in this region, the top crop of the cotton is gathered, and the sweet potatoes are well grown, the cattle and hogs are eating off the grass that has sprung up voluntarily, and the cow-peas that have been planted in the corn field. The progressive farmer would this month start his plow and turn all the growth eight or ten inches under the surface, and plant the field to oats or rye that would yield here as heavily as in Ohio. November comes, and he plows and fertilizes his land and plants sugar-cane; digs and banks his sweet potatoes; plows and mellows the land for an acre of casava, that shall give him 30,000 pounds of roots rich as Irish potatoes in starch, and closes the month by working up the sugar-cane. December comes, but no frozen ground, and the work of preparing for the early garden and truck must be looked to. The turnips, beets and cabbages that were planted in September are now ready for market and a new planting must be attended to. The land for Irish potatoes must be prepared and the fences may as well be repaired and rebuilt. The Bermuda and Smut-grass pastures are now prime, aud the cattle, sheep and hogs, the latter tarned with iron jewels in their rooters, are turned on them. The holes for planting pecans, walnuts and chestnuts are dug and fertilized, and the nuts planted. The beds for the cuttings of figs and Le Conte pears made ready, and the cotton marketed. January comes, but the ground is still open with bright sunshine. Pears, figs and other cuttings must be set, and the farmer plants his Irish potatoes. At the beginning of the month the peas, cabbage, beets, turnips and onion sets are planted in the garden, and the watermelon seeds can be trusted out the last of this month. The corn lands should be plowed and prepared for planting. February comes, the corn may now go into the soil and the sweet potatoes be set out for draws or seed. If the pastures are getting short the cows may be turned on such fields of rye as have been planted for that purpose. Tomatoes, egg-plants, etc., must be started in rich beds in time to be ready for planting early in March. A second planting of peas may be made the first of this month. March comes; the corn must all be planted early this month. Put corn between the Irish potato rows, as they will be out of the way before the corn needs the land, and harvesting them will cultivate the corn. The oats and rye will begin to show flowers this month, and so much as is designed for fodder can be cut and dried for hay. The ground may then be plowed and prepared for the cotton crop. Beans may also be planted the first of this month, as well as cotton. The cultivator and hoe will be in full employ in subduing the starting grass and weeds; everything in the truck garden must be planted, and much of it hoed and fertilized with liquid manures. The strawberries are ripe and by proper fertilizers their season can be continued for three months. April comes; the corn, sugar-cane and cotton require working; the gardens and truck patches need care and attention. The oats and rye are ripe and must be harvested the first of the month and the land plowed and prepared for crops of cow-peas and sweet potatoes, which may go in as soon as the land is prepared. Lima beans may be planted on rich land from which the oats have been taken. Peanuts should be planted the first of this month and kept clean. Melons may also be planted the latter portion of the month for a late crop. The green peas are all harvested and marketed, and the string beans are coming on. The cabbages and beets are also ready for market. As fast as the peas are gone upland rice should go in and sweet potatoes can follow the garden crops. May comes; the gardens have ripened their winter plantings, the melons are set and swelling to maturity. The corn has received its last hoeing and cow-peas may be planted between the rows; some plant sweet potatoes on the flat surface to be hilled up afterwards. The melon vines have covered the ground and need no further care. Spare ground may be prepared for sweet potatoes. All the crops need cultivation, and the sugar-cane should have fertilizing with potash, bone meal, guano and land plaster; a similar application to the cotton will double the product of lint. June comes; all the spare ground must be filled with sweet potatoes and cow-peas, unless it shall have been prepared and designed to let a crop of annual grasses grow for mowing and hay. Millets of several kinds may still be sown for hay. Melons are ripening and demand attention for marketing. Corn is ripening and needs no more tilling; the cotton cannot be neglected this month. Beans, except the Limas are ripe, and the ground may be planted with cucumbers for pickles. The figs and Peen-to peaches are ripening, and must be preserved and sent to market. The blackberries were ripe in the spring months. July comes, with heat and summer rains; the corn matures, and may as well be put in the crib and the fodder housed. Some cotton bolls have opened and the work of picking begins. The honey peaches ripen with native seedlings and Le Conte pears are coming in. Seed of the cow-peas must be saved, and the earliest planted cut for fodder, or plowed under with the corn stalks to fertilize the ground, and a second crop planted. A patch of sweet potatoes may be planted for the hogs not jewelled to dig, when the corn has grown. Cattle, sheep and hogs greedily devour these vines. The second crop of Irish potatoes may be planted this month. August comes; cotton picking is at its height, and on account of showers must be closely attended to. In the garden, strawberry plants to bear fruit next February must be set; tomatoes and egg-plants to fruit in November and December can be set this month. The peaches, figs, grapes and Le Conte pears are still ripening. Some melons and cucumbers can be yet gathered, and tomatoes may be in full bearing. September comes and closes the year. The cotton picking goes on, grass and cow-peas are cured for fodder, and the plow is sent afield, preparing for the oats and rye of next month's sowing. This is also the month to prepare the lands and plant the roots of the Bermuda and some other grasses. Experiments may be made now with sowing clover and lucerne. The earliest planted sweet potatoes will do to dig, and peanuts can be harvested.

Thus we have passed around the year, have seen that some crop of value has been growing on the land all the time, not merely occupying, but absolutely growing on it. The field has yielded two and three crops during the year, and if the vines, leaves, stems and refuse have been buried in the soil, no more fertilizers need be put into the soil, than is required in the States farther North. Reckoning the value of land by the number of crops it can produce and the ease with which its fertility may be kept up, it must be plain that the lands of Middle Florida are more than twice as valuable as those of Iowa, by reason of the climate over them. Many crops can be grown successfully and profitably of which mention has not been made for want of room. Tobacco alone must suffice. This crop may be planted early in March from Cuban seed, and if well tended will be ripened and cut in June and July. Then if the stubble should receive a dressing of fertilizers and proper culture, a single ratoon to each hill may be allowed to grow, and produce a second crop not inferior to the first cutting.

STOCK RAISING.

The war nearly stripped this region of its stock of cattle and sheep. The tenant system has not improved the race or numbers. But from what has been said it must appear that few regions have greater facilities when the business is taken hold of understandingly, and few can give better returns. Cows feeding upon the crab and other annual grasses in summer, and the Bermuda and other perennials, with soiling upon green corn, sorghum, millet, millo-maize, and beggar weed, with sweet potato, etc., give a full average yield of rich milk, at all seasons of the year, and dairying may be made a profitable business. Fowls can find green feed at all seasons, and eggs can be secured at all seasons.

FRUIT CULTURE

Has made rapid strides within a short period. The standard varieties of pears have all been fruited on the "red lands;" but the Le Conte and its congeners, propagated by cuttings, bid fair to supercede all others, as it is not unusual for two crops to be produced the same year. Peaches do well, and the early ones like the Peen-to, are very profitable. Most of the American varieties of grapes do well. Figs bear heavy and sure crops, and the fruit may be gathered according to varieties from early June to November. Japan plums and persimmons do well and produce well. Almonds can be grown as well as the peach. The American varieties grow wild and afford excellent stocks on which to rear the foreign varieties. A few orange trees may be seen in sheltered locations on the high ridges; but near the Gulf coast they are more frequent, as are also bananas. Each of these fruits might be enlarged upon, but enough has been said to show that with judicious selection and careful cultivation this region can produce as profitable crops of fruits as can the orange orchards of Central Florida.

HERNANDO COUNTY.

Leaving the rich ridges and hills of North Florida, other regions require a brief notice. These are the high lands farther south. not less high and many assert not less fertile. Geologists have told us that Florida as a whole was redeemed from the ancient tertiary oceans, and the evidence is everywhere seen in the rocks and soils, of the waves of that ocean having rolled over every portion of the State. When fuller examinations have been made, there will be printed on leaves of paper what is already engraven in the rocks and soil, the fact that Florida has risen at different periods from the waters of those ancient seas, and in detached portions; not by volcanic action, but in the course of terramotal convulsions, lifting the whole of the United States east of the Rocky Mountains, perhaps those mountains themselves. While the warm waves were beating against the red hills of North Florida, southeast might have been seen three not inconsiderable islands. One of these occupied the place now known as Alachua county. Another south of this and near, is in Hernando, and the third in Sumter, Orange and Polk counties.

All of these were uprisings of the old coral reefs, covered with the muds and sands of that old sea. On or near the summits of the Alachua and Hernando islands, it would seem that these muds and sands were washed off and left the coral peaks naked and now visible to human eyes, yet generally covered many feet, giving the basis for the present soils. These rocks like most lime rocks of all periods are cavernous, and in some places large streams are lost, and in others larger ones burst forth; and again well-like openings reach from the surface to internal rivers. These out-croppings are generally covered with hammocks of large oaks, hickories, red bays. magnolias, basswoods, cherries and ashes, and a dense undergrowth of smaller trees and bushes. The Withlacoochee valley divided the islands when ocean waves rolled between Alachua and Hernando. The same valley with those of Peace and Hillsboro separated Hernando from the Sumter Islands.

Not only were rivers lost beneath these rocks as is the Santa Fe unde-

the natural bridge, but navigable rivers like the Silver Spring break from near their base. The Hernando island seems most prolific in these large springs, and a few miles from the Gulf we find the Crystal, Homasassa, Chasseekowiska, bursting forth full grown rivers from great springs, through which may pass vessels of light draft from the Gulf to the springs themselves. These with the Withlacoochee supplied all the transportation to Hernando until the present year, when a railroad track has been laid to Brooksville. Though the rich lands of Hernando had long before attracted the early settlers the county has remained almost an unknown land. The railroad from Fernandina to Cedar Keys had passed through Alachua before 1860, and the facilities of transportation have made that the most populous county in the State.

Not so Hernando; notwithstanding the rich hammocks of Annutaliga in the north and Choccochattee southeast of Brooksville, and other places like Fort Dade, with soils not inferior to the best in the State, nor less healthful than the best of counties, Hernando county has remained an unknown land to most of the world except the daring pioneer and the hunter. All its hammocks are high and rolling and thoroughly drained. The soil is fine vegetable mold mixed with clay, resting upon marl, lime and clay, capable of producing crops of sugar, cotton and corn for years without rotation or artificial fertilizing. A few wet places have been drained at small expense by opening natural outlets and have proved unsurpassed in the production of sugar-cane and vegetables. The surface in the centre of the county rises up to 300 feet above sea level, and near the Gulf coast along which the county stretches a distance of seventy-six miles, is very little waste land. Besides the hammocks there are larger tracts of dry lands covered with large yellow pines, growing in a soil nearly equal to the hammocks, and by many prefered for residences and orchards. The wetter lands on which the pines are smaller and saw-palmettoes, gall bushes and grasses have taken the place of the willow-leafed oaks, can be drained and made productive as soon as the water shall have been removed from the vegetable mold that now covers the surface. Probably no county in the latitudinal belt contains so great a proportion of rich soil as does the county of Hernando, and it will suffer nothing in comparison for healthfulness. It lies in the latitude and has the isothermal temperature of the counties of Sumter, Orange and Volusia, the orange belt *par excellence* of the State, and the same semi-tropical products can be grown as in them. They have been longer accessible to immigration than Hernando, and hence only are better known and spoken of.

INDIAN RIVER REGION.

Passing to the southeast coast one reaches the Indian River or sound, which is now attracting the attention of seekers for pleasure and health, also of those desiring locations for the growth of the sub-tropical fruits and products of the highest economic and commercial value. It is also the objective point on the Atlantic coast of the transportation companies on account of its great promises of present and future productiveness.

The river or sound that gives name to the region, lies parallel to the Atlantic coast, and is separated from it by a narrow strip of land varying from a few rods to three miles in width. The water is salt from the tides, clear and transparent, and connected with the ocean by Indian River inlet about 75 miles south of the head of the river, and Jupiter inlet at the extreme southern end. From its north end to within twenty-five miles of Jupiter inlet, at the extreme southern end, the river is from one to six miles wide and has a general course nearly north and south, of one hundred and thirty miles and is navigable for vessels drawing six feet of water its entire length; and vessels of seven feet can pass the bar of Jupiter inlet at high tide. The southern twenty-five miles of this river is known as Jupiter narrows, and is from one-fourth to a mile wide, and is famous for its large and delicious oysters; and the inlet is the best fishing ground on this coast. The river is well stocked with a great variety of the most choice kinds, as the mullet, cavalli, snapper, blue-fish, sheephead, sea-trout and others. Good oysters and clams abound throughout the entire river and shell mounds of great size are found on its banks.

The shores of the river generally rise at an angle of 20 to 25 degrees from the waters without marshes or swamps, and at some places they rise perpendicularly 15 to 25 feet. Fine live oak hammocks of considerable extent are found on the shores each side of the river near the northern end, and from these lands come the celebrated Indian River oranges; bananas and pineapples are also grown to some extent in the same neighborhood. These lands are adapted by soil and climate to the raising of garden vegetables during the winter months; also to sugar, etc., in summer. On the narrow peninsula and on both banks of the river at Eau Gallie, garden vegetables may be matured some weeks earlier than inland directly west. On the narrow strip and the banks of the southern half of the river cold seldom injures the pine-apple, banana or cocoanut, particularly on the ocean side.

From Jupiter Inlet to the Miami river is seventy-five miles, nearly in a direct line. In Dade county parallel with the coast are bays, rivers, lakes and sounds, of salt water, like Indian river, separated from the ocean by a narrow strip of rocky land from a few rods to a mile in width. These waters are separated from each other by low grassy savanas entirely overflowed during the rainy seasons. The outlets from them to the ocean admit the tides and render them salt. The St. Lucie and Jupiter rivers may be considered as parts of the Indian river. Lake Worth lies about eight miles south of Indian river, and is twenty-one miles long. The Hillsborough and New rivers are drains from the Everglades, and have during the rainy seasons deep swift currents sufficient for navigation, but the bars at their mouth are shallow.

On the west bank of the Jupiter narrows the lands rise to an elevation of fifty or sixty feet and are covered with thick scrubby growth, always green. South of the inlet and on the coast lies a strip about a half mile wide and eighteen miles long, known as Jupiter Island. This strip separates most of Lake Worth from the ocean. On this are some excellent hammocks, almost exclusively of tropical trees, and full one-half the population of Dade county are located on this ridge. Rocks frequently crop out in these ridges sufficiently to interfere with cultivation with the plow; nevertheless pine-apples, bananas and cocoanuts can be grown among them. The tropical character of the timber indicates that this region is so nearly free from the effects of frost that most of the fruits and plants of the West India Islands can be grown here. The gardener may here have crops of vegetables growing every month in the year, and may place his products in the market of the North at times when he can have no competitors.

The prevailing winds are from the east and the ocean, warm without being oppressively hot, and always cool and agreeable in the shade. Vegetation though luxurious, is constant, and the effects of decomposing vegetations are nutralized by the new growths. Hence, this is far from being unhealthy to residents; and if account is taken of the equability of the climate and that its vegetable growths are constant, all the lands on which human habitation may be had must eventually be appropriated for that purpose.

HALIFAX RIVER.

Travel and transportation have during many years reached the Indian river through the Halifax and Hillsborough rivers from St. Augustine. A company is now engaged in cutting open this channel. On the west bank of the latter is where the English colonists undertook the work of growing sugar-cane and indigo and drained many thousands of acres. These lands have in the past been still kept under cultivation producing large crops. On the west bank of this river are some of the best live oak, hickory and palmetto hammocks in the State. Experience continued for more than a hundred years, has demonstrated that this tract is as healthful as any portion of the State, and it has also been proved to be capable of producing oranges not inferior to the groves on Indian river. The opening of water transportation to St. Augustine and of railroad communications with Jacksonville, makes this region a very desirable one for the cultivation of fruits and vegetables, and its vicinity to the ocean beach desirable for residence throughout the year.

CONCLUSION.

The heterogeneous character of the climate and soil of Florida gives every man who may desire to locate a home within its limits an opportunity to choose a location suited to his wants or fancy. In the northern counties each winter there occur a few frosty mornings, and cold days on which fires are necessary for comfort. If the would-be settler shall believe these necessary to the invigoration of the human system he will select his location there. Those who would avoid these and breathe the warm and more summer-like air the year round, inhale the balsamic odors of growing trees and plants, with the perfume of flowers, can find a residence in the cocoanut groves and dry lands of Lake Worth and Charlotte Harbor. Between these as extremes, exist locations where enough of cold exists to spread a hoar frost on the dry leaves and sticks, or to shoot a few needles of ice into a thin plate of water, or a whiff of cold wind from the north may remind one of the existence of a cooler region in that direction. The heat of summer of all portions is remarkably equable, in any locality seldom reaching 90 F., never passing 100.

Is a breeze direct from the ocean desired? The would-be settler has 1,200 miles of sea coast from which to choose his location, and these augmented by other hundreds of miles on the islands and keys, and other hundreds, of shores of the almost countless clear, fresh water lakes scattered in every county of the State. Many will say, "I want soil on which I may grow something to eat and sell. Florida as I see it is all sand." Have you seen all of Florida, and do you speak from personal observation? Have you calmly considered how very much Florida owes to these sandy soils for what she is? Perhaps it may result all things considered that the people of Florida should bless God for these same sands. Consider how sands absorb waters steeped in decaying vegetations, and so bury all causes of malaria and purify the air we breathe; how sandy soils facilitate cultivation by never packing by reason of droughts, or delaying work by reason of heavy rains. Have you not observed that your plants suffer less from both droughts and drenching rains when growing in sandy than in tenacious soil? Do you not know that vegetable and nearly all fertilizers applied to a sandy soil are more effectual, and sooner felt by plants than if they were applied to the stiff compact soils of clay and marls? Finally, are you quite sure what you call sand, is such in fact? Have you never during your life been deceived by appearances? Seeing may be a foundation for belief, but it is not always the best and surest test of truth. An analysis of this which you call sand, may be rich in the elements of plant food. Lime, alumnia, potash, soda, iron, phosphorus and other materials may exist which your casual observation has not detected; perhaps you cannot detect them. Plants are better analytical chemists than are found in the labaratories, Have you consulted these, and learned their lessons? Do not these lift up their heads and bless God for these sands? Before you pronounce judgment, consult the men and women who have come from among the mountains and from the alluvial bottoms of the rivers, overflowed by heavy rains and melting of the snow; and from the black plains of the Upper Mississippi river and its branches, where men and women shake with chills in hot days and burn with fever, and who reside on, work, reap and live from the products of these sands. Ask them what they think? You will see them lift up their hands and hear them cry aloud blessing God for the Florida sand.

But you are mistaken if you suppose all of Florida is sand; nor is it swamp. The man who says so either had not seen it, or he had the dyspepsia in chronic form. Why, my friend, you can get stuck in a clay bed of Florida as well as in Indiana or Kentucky. Florida is a great State, larger than any other east of the Mississippi, and cannot be all seen in a day, a week or month. A year may be too short a time. Spend a year inquiring and then look back and see how little you knew of it the first month you were here.

Go to the hill lands of Madison, Jefferson, Leon, Gadsden and Jackson counties, and you shall find a tract of land bigger than the State of Connecticut that you will not call sand, and yet unlike that State free from rocks and boulders. So too in the counties of Alachua, Marion, Sumter and Hernando are tracts of equal square miles of soil containing all the clay needed for easy cultivation.

"Sands!" Man from the North; do not berate Florida for sands, until Cape Cod, Nahant, Martha's Vineyard, the Connecticut valley and the entire coasts of Rhode Island and Connecticut shall no longer be sand dunes. Let New York hide the sands of Long Island, the shores of Lake Ontario, and the sand hills of Pottsdam. Let New Jersey withdraw her drifting sands from Sandy Hook to Delaware Bay. Michigan and Indiana should cover the coast of Lake Erie from St. Joseph to Chicago with soil not sand, and Wisconsin should hide whole counties of Silurian sand before the people from those States have a license to twit Florida about sand. If the residents of those Northern States could but bury their rocks with Florida sands, more grass would grow there and more of other things.

Well, you have made up your mind to stay, and you want lands where you can grow your orchards. All the dry lands where the hard woods grow, where the pines are tall and straight and the willow-leafed oaks are found, will answer, climate determining the variety to be grown.

For stock raising, lands that will be improved by draining are best adapted to grasses, and where the saw-palmetto abounds is better than the wet savannas. These lands cleared of the natural growths and set with grasses adapted to the soil and climate, converting them into meadows, can be mowed from three to six times a year, and yield one to two tons of hay per acre at each mowing. As pastures, prepared in the same manner, during all the months of the year they will not suffer in comparison with the June pastures of the dairy farms of New York and Wisconsin.

For gardens and vegetable raising, both the dry lands and wetter may be used, the last containing most vegetable matter in the soil after being cleared of its water. Suitable lands for this purpose can be found in all portions of the State, the question of earliness being dependent upon parallels of climate. After selection and preparation, less fertilizers will be required in Florida than in any other State, and the products will be more profitable by reason of the seasons they can be placed on the markets. Moreover, the gardens may be kept in constant production giving crop after crop, unlike those of the North producing only a single one.

Would you pluck fruit from the peach, nectarine, plum, apricot, fig, strawberry and wild blackberry? Your location may be in all the northern counties, and even where the orange, lemon, lime, grape-fruit and shaddocks grow farther south. Farther south you may suck the rich pulp from the mango, sugar-apple, chiramoya, and eat the pine-apple, banana and guava, ripe, mellow and fresh from the plant or bush. The fruits stretch out in long lists of families, species and varieties known and unknown elsewhere in the United States, ripening every day and week in the year. Residents alone enjoy them all.

Florida is not only the blooming land, but she is also a land of fruits; and to her castilian name may be added FRUCTOSA. Her flowers ever bloom, her fruits are never gone.

Would you do general farming, raise cotton, grain, grass, stock, fowls and vegetables, and have an orchard? Then you want lands moist and dry, hammocks and pine lands, lands naturally well drained and lands requiring to be drained. You want a muck bed and a reserve for timber. These you can find in almost all parts. Inasmuch as your crops are various they will require all kinds of soils and must receive various fertilizers.

Do you ask what you can grow with profit? You need not be long in discovering that. From crops grown in Ohio you must omit wheat, clover, and the meadow and pasture grasses, perhaps barley and buckwheat, and sorghum. But corn, oats, rye, millet, peas, beans, and all the truck and roots of the garden and field will thrive here in their season, and these you may supplement with rice on both wet and dry land, giving you more bushels, weight and value per acre than wheat in Ohio; sugar-cane more luxuriant than elsewhere in the United States, millo-maize, sweet potatoes, yams, casava, arrowroot, increase the starch products. You may have grasses more nutritious and luxuriant than those left out, to cover your meadows and pastures. Cow-peas and beggar weed more than fill the place of clover in the fodder crop. The garden and truck patch is ever producing something for the table and the market. Crops in Florida come not singly, but succeed each other in double, triple, quadruple successions, on the same land in the same year; and if the soil shall be fertilized and cultivated as the Northern farmer fertilizes and cultivates for his one crop, the yield of each here will equal in value the one on the Ohio farm. Your cattle, sheep and young horses shall gather their food in the pastures and fields to which they are admitted during the winter as well as summer, and as to them the pitchfork and scythe may be hung up. If you yard them at night most of their manure may be added to the compost pile. Lands supposed to be worn out are only scratched to death, and the plow and strong team can find another and richer farm eight inches beneath the surface, and bring it to the light for the use of the farmer. The compost pile and crops turned under will keep that farm from another burial; and roots of the luxuriant plants will keep the dissolving minerals pumped up for the uses of other plants in the rotation of crops. All things considered, and by reason of the climate the Florida farm has a productive capacity equal to two or three farms in Ohio. Suppose the sandy soil of Florida be by nature inferior to the soil of Ohio, this new element obtainable here, not there, climate, comes in and places a value on the Florida acre equal to two or more acres in Ohio. Where else is that element purchasable?

Go where you will, search the States and Territories from ocean to ocean, from the cold British Possessions with their short summers and long winters of snows and ice, to the Gulf of Mexico, and the hot parched plains of Mexico, and you can find no such climatic conditions; no lands susceptible of greater improvement at equal expense; no region producing such varied and valuable products as this; no region constantly fanned by such health-giving breezes.

Great heats do not burn by day nor colds pinch by night. Rains do not flood the lands nor droughts destroy vegetation. Summer, the most pleasant of all seasons is not avoided, nor is the approach of winter dreaded. The entire population of the State bear evidence to the beauty and comfort of the one; and the hundreds of thousands who flock hither in winter bear testimony to the other. If there be any people who should sing psalms of praise to the Great Father for gifts bestowed, that people are the residents of Florida. The millions of unoccupied acres invite the suffering millions of other less favored regions to a residence here.

Not only does the land invite settlers, but the waters say come. Fish and game as plentiful, as gustive as those in the cold waters of the St. Lawrence and Newfoundland, swarm along the shores and enter the bays, sounds and inlets of Florida. Oysters and clams not inferior to those of the Chesapeake, line the sea coasts, and the green and loggerhead turtles swarm along the southern shore as nowhere else.

Climate, soil, trees, flowers, fruits, the waters of the sea, the land, and last and greatest of all else, healthfulness, invite the immigrant to Florida. The varying character of these in different portions of the State allows most tastes to be suited, except that change must be expected.

Before selecting your location, carefully consider all the surroundings. As far as possible understand the conditions of the climate and soil and the natural growths. Inquire of those who know, not of the chronic grumbler, who sees nothing good, dissociated from the place where he was brought up, perhaps not with that; nor from him, who but last week crossed the line of the State, and having spent his time in his hotel, claims to have seen all of Florida and to know all about it. The man who may have spent a winter here is not qualified to speak of summer from his own experience, nor are those sinking under the crushing weight of phthisic, qualified to give lessons about healthfulness. You will find three things necessary: Firstly, Know what you want and try and get it. Secondly, Determine what you will do and do it; and Thirdly, expect changes, and be contented with them, with your location, choice and yourself. These will make your Florida home all you can desire.

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